

Lagrange

- 1) Given a table of (x,y) pairs...assign the x values as: $x_0, x_1, x_2, \dots, x_n$, next assign the y values = to $f(x)$: $f(x_0), f(x_1), f(x_2), \dots, f(x_n)$
- 2) Output $\sum_{i=0}^n L_i(x_i)$
- 3) Time for cycle:
 - a) For $i = 0 \leq n$, $i++$
 - (i) For $j = 0 \leq n$, $j++$
 - (ii) If $i = j$
 - (iii) $L_i(x_j) = 1$
 - b) For the other side
 - (i) $L_i(x_j) = 0$
 - (ii) For $p = 0 \leq n$
 - (1) if $p \neq i$
 - (iii) $L_i(x) = \prod_p \frac{(x-x_p)}{(x_i-x_p)}$
- 4) End